

NOTES ON THE REPRODUCTIVE BIOLOGY OF THE PYGMY MULGA GOANNA *Varanus gilleni* LUCAS & FROST 1895

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This small arboreal species was first collected in 1894 during the famous Horn Expedition to Central Australia. Described from two specimens both taken from trees it was named after F.J. Gillen who was Chief Officer of the Alice Springs Telegraph Station.

Although occasionally displayed in zoo collections the first worker to publish on its biology was E.R. Pianka in the Western Australian Naturalist, Vol. II, No. 4 1969. Although he examined 104 specimens from Australian State Museum collections, the five female *V. gilleni* available to him did not contain large ovarian or oviducal eggs and reproductive data on this species is still scanty. On the 25th August 1973 the author received a gravid female collected by Mr Karl Roth of Alice Springs. The specimen was collected at 1600 hrs temperature 23° celsius, from under the bark of a Desert She-Oak Tree (*Casuarina decaisneana*).

The female was immediately placed in a small aquarium containing a layer of red desert sand and bark sheets for the animal to hide under. Over the next two weeks live food was offered on numerous occasions, but only in two separate instances a single adult Prickly Gecko (*Heteronotia binoei*) was taken.

On the 18th September the female became extremely active and gave indications that she was ready to lay by digging in several different areas of the aquarium floor. Regular observations throughout the day until 2300 hrs revealed that the laying site had not been selected. At 0700 hrs the following morning it was noticed that an excavation had been made under the water container. Upon lifting it carefully, four eggs (one immature) had

been deposited underneath. These were numbered, then removed and measured. Two measured 30mm x 18mm and the third 28mm x 18mm.

A shallow screw top perspex container with an aerated lid was filled to a depth of 50mm with a mixture of peat moss and fine river sand. Three indentations were made on the surface and an egg placed in each. The eggs were orientated exactly as laid and then covered with a thin layer of slightly moistened cotton wool.

The container, was placed in sunlight for half hour periods daily and the cotton wool remoistened when necessary. The eggs were inspected three times daily to check their progress and on the 29th December at 2355 hrs a very fine slit was noticed on the surface of one egg and at 0700 hrs the following morning the entire head of the hatchling broke through.

The remaining eggs showed no signs of creasing until the morning of 31st December and by 1700 hrs both heads had emerged from the eggs.

All three hatchlings took 24 hours to completely emerge from the eggs and appeared exhausted by the effort.

Once the entire head appeared from the egg slit, it would constantly turn from side to side, the tongue flickering throughout as the monitor began sensing its new environment. If anyone approached, the container, heads were completely retracted into the inside of the eggs. Eighteen hours after leaving the eggs all three hatchlings were exploring their new surroundings and fed immediately on juvenile scincid lizards (*Carlia gracilis*) and small grasshoppers.

The incubation periods in this instance were 103 and 104 days, or approximately 15 weeks.

The measurements of the hatchlings at birth were:

	No. 1	No. 2	No. 3
Total Length	134mm	138mm	135mm
Snout vent	61mm	64mm	62mm
Snout to ear	15mm	15mm	15mm
Snout to eye	8mm	8mm	8mm
Front leg	18mm	18mm	15mm
Back leg	20mm	21mm	21mm

Two further gravid specimens have since been examined by the author N.T.M. R0704 S.V. length 160mm contained 7 eggs and R1579 S.V. length 150mm 4 eggs.

REFERENCES

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(1969) Notes on the Biology of *Varanus caudolineatus* and *Varanus gerrardi*. The Western Australian Naturalist, Vol II, No 4.

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